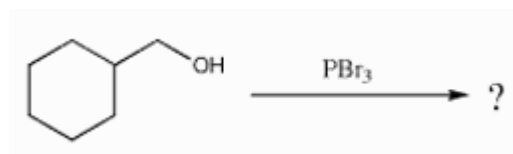
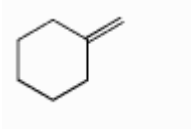
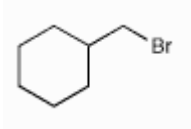
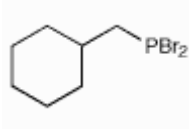
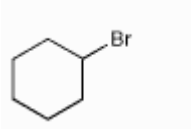
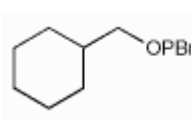


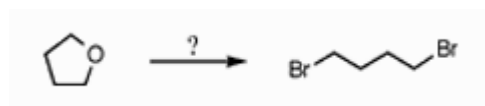
# Organic Chemistry (I) Chapter 9

## 1. Predict the major product of the following reaction.



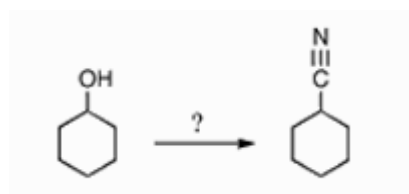
- A.  B.  C. 
- D.  E. 

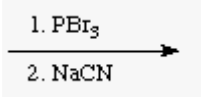
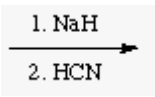
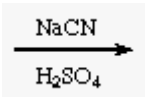
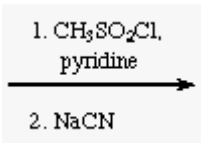
## 2. What reagent would be required to accomplish the transformation shown?



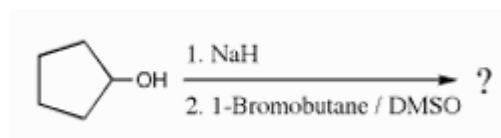
- A. Br<sub>2</sub> B. HBr, Δ C. NaBr, NaOH
- D. Br<sub>2</sub>, light E. NaOBr, heat

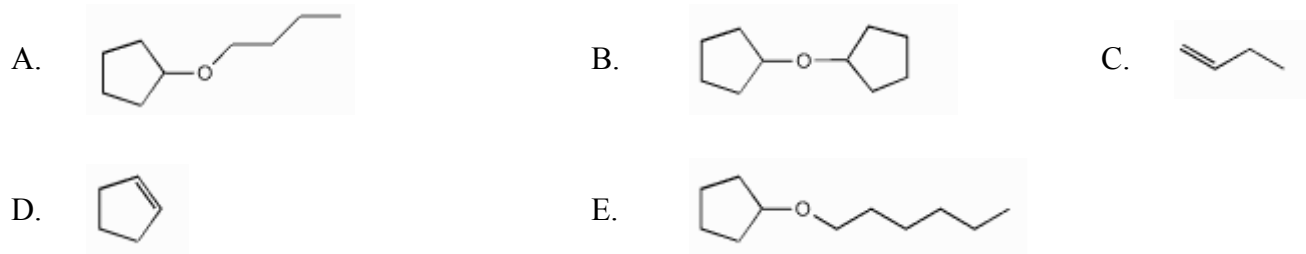
## 3. Which of the following reactions could be used to make cyclohexanecarbonitrile from cyclohexanol?



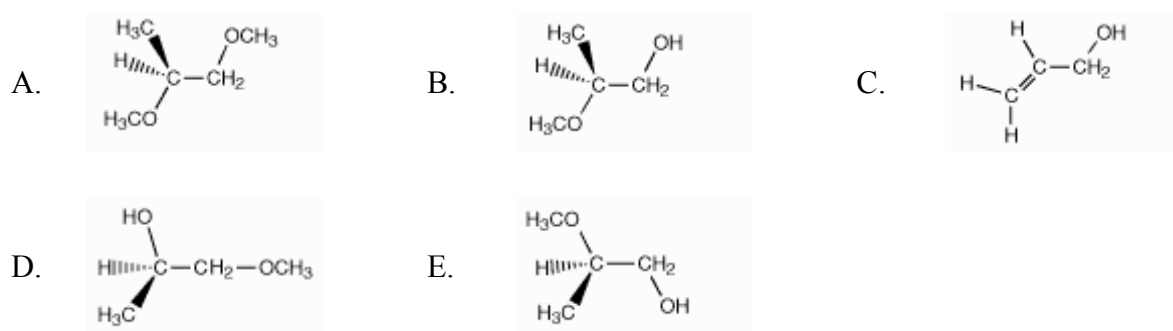
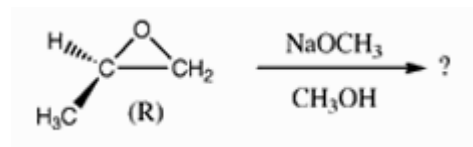
- A.  D. 
- B.  E. Two of these would work.
- C. 

## 4. Predict the major product of the following reaction sequence.

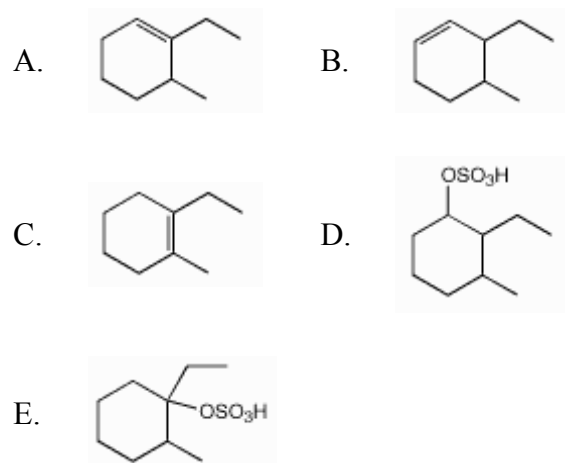
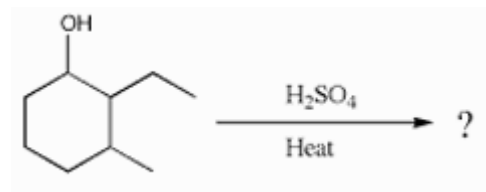




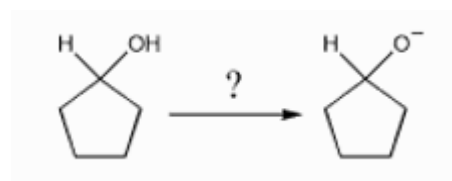
5. What product(s) would you expect to obtain from the following reaction?



6. Predict the major product of the following reaction.

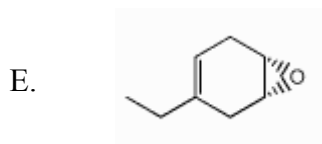
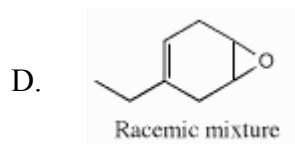
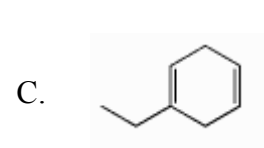
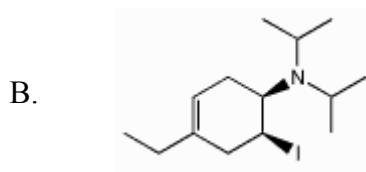
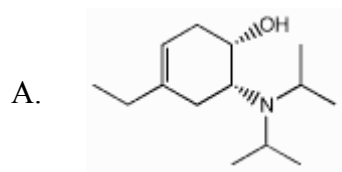
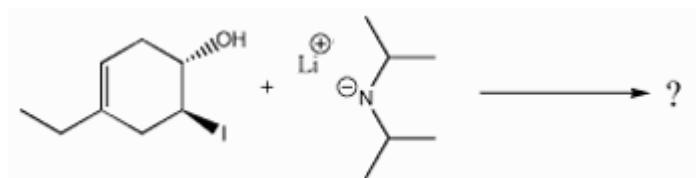


7. Which of the following would *NOT* efficiently accomplish the reaction shown?

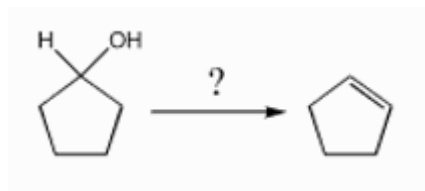


- A. NaH      B. Na (metal)      C.  $\text{-NH}_2$       D. K (metal)      E.  $\text{-OH}$

8. What is the major product of the following reaction?



9. What reagent(s) would be appropriate to accomplish the conversion shown?



A. HCl

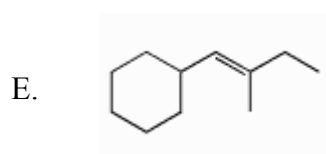
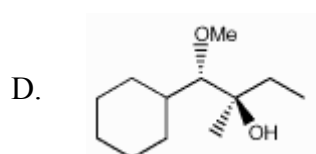
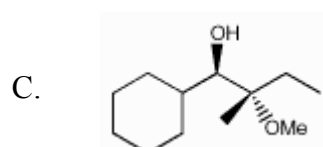
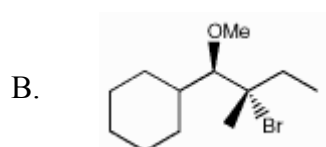
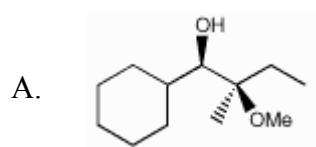
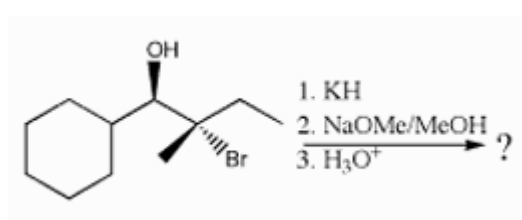
B. HNO<sub>3</sub>

C. H<sub>2</sub>SO<sub>4</sub>

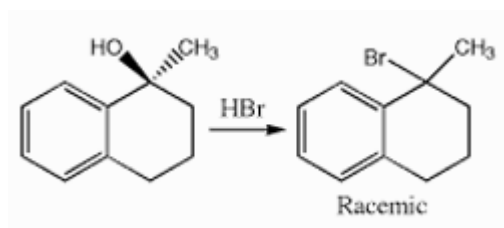
D. HBr

E. K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub> + H<sub>2</sub>SO<sub>4</sub>

10. Predict the major product of the following reaction sequence.

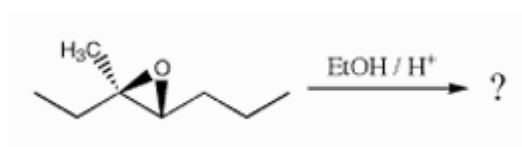


11. If the following reaction proceeds as indicated, what mechanistic pathway does it most likely follow?



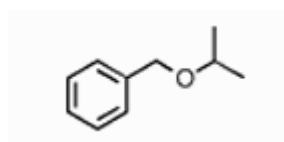
- A. E2  
 B. E1  
 C. S<sub>N</sub>2  
 D. S<sub>N</sub>1  
 E. Free-radical halogenation

12. What is the major product of the following reaction?



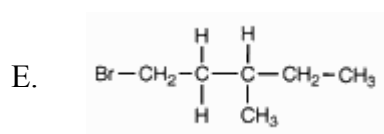
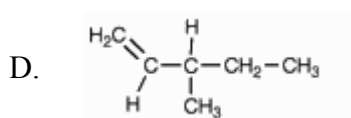
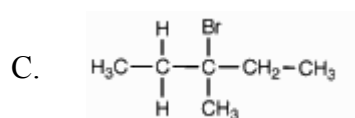
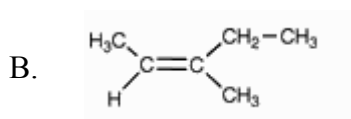
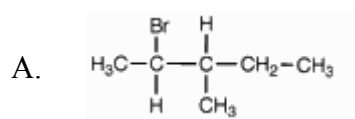
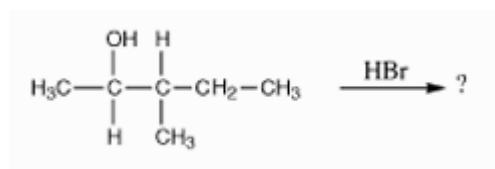
- A.
- B.
- C.
- D.
- E.

13. Which of the following reactions would efficiently provide the ether shown?



- A.
- B.
- C.
- D. Two of these would work.  
 E. All of these would work.

14. What major product would you expect from the following reaction?



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15. Which reagent will be useful for effecting the following transformation?

